REMARKS

Favorable reconsideration and allowance of the subject application are respectfully requested. Claims 1-51 are pending in the present application, with claims 1, 24, 37, 41, and 47 being independent. Claims 5, 34, and 38-40 have been amended by way of this response.

Claim Rejections Under 35 U.S.C. § 112

The Examiner has rejected claims 5, 34, and 38-40 under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. The Examiner has suggested that the aforementioned claims include subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventors had possession of the claimed invention. The Examiner suggests that the instant application's specification "is not reasonably described to convey that the "cost" used to determine a server to be selected is money related." Further, the Examiner has suggested that after "careful review of the instance application's specification reveals that the "cost" used in determining a server to be selected is communication related." Applicant respectfully traverses the Examiner's attempt to use an art-recognized term "cost" in contrast to its ordinary meaning.

Without conceding the propriety of the Examiners' rejection, but merely to expedite the prosecution of the present application, Applicant has amended claims 5, 34, and 38-40 to remove the term "monetary." However, Applicant submits that the term cost is synonymous with price, e.g., monetary, associated with communication.

For example, page 11, lines 7-21 of the present application clearly uses the term(s) cost(s) in a related context to cost schedules and charges, e.g., fees, prices or monetary costs associated with various connections and communication paths. Merriam-Webster's dictionary, also available at www.merriam-webster.com (http://mw1.merriam-webster.com/dictionary/cost) , offers the following definitions for the noun (as it is used throughout the specification and claims), "cost:"

> Main Entry:
> **[1]cost**
> Pronunciation:
> \'kȯst\
> Function:
> *noun*
> Date:
> 13th century
> 1 a: the amount or equivalent paid or charged for something : **PRICE**
> **b:** the outlay or expenditure (as of effort or sacrifice) made to achieve an object
> 2: loss or penalty incurred especially in gaining something
> 3 *plural* : expenses incurred in litigation; *especially* : those given by the law or the court to the prevailing party against the losing party

Applicant submits that the term cost, as used throughout the specification, is clearly consistent with the definition provided under 1a above, e.g., the amount or equivalent paid or charged for something: PRICE.

Applicant submits that support for this definition, and the previous use of the term monetary, may be gleaned by those unfamiliar with the term "cost," from the use of the term in the specification. In contrast, the Examiner has suggested that the term "cost" is not related to anything monetary. Instead, the Examiner has suggested that the term "cost" means "communication related," which appears inconsistent with any definition listed above. See, e.g., Office Action mailed on February 6, 2007, page 3,

first paragraph. Relying upon the Examiner's suggested definition, which Applicant was unable to identify in any dictionary, the Examiner's offered definition is quickly called into question when inserted in place of the term "cost" throughout the specification. For example, page 4, lines 15-32 of the original written description uses the following exemplary phrases incorporating the term "cost" in a manner inconsistent with the definition offered by the Examiner:

> An aspect of some embodiments of the invention relates to a method of selecting a server to represent a site for a client, *based on the [communication related] of connecting from the client to the servers representing the site*. (lines 20-22) . . .
>
> Alternatively, the server is selected based on a complex function which *takes into account the [communication related] of using the connection to the Internet used*. (lines 23-25) . . .
>
> In some embodiments of the invention, the CLB determines, for each server representing the site, for each connection form the client to the Internet, *a plurality of connection related parameters, including [communication related]* and one or more other quality parameters. (lines 26-28)

As the Examiner will note, substituting the Examiner's offered definition of "communication related" results in rather awkward prose. In contrast, the substitution of the word "price," e.g., monetary cost, which is fully consistent with the definitions provided above and the use of the term "cost" throughout the specification, results in a more logical reading of the aforementioned passages. As evidenced at page 6, lines 30-33 of the present application, the substitution of the Examiner's suggested definition would leave the passage replete with circular references to the term communication.

> Optionally, selecting one of the servers comprises selecting a server under a constraint that a *lowest [communication related] client*

> *communication connection* is used in connecting to the server. Optionally, selecting one of the servers comprises selecting a server which minimizes *a weighted sum of communication [communication related]* to the server. (Emphasis Added).

In summary, Applicant respectfully submits that the Examiner has not provided any definition or interpretation of the term cost which is consistent with the specification, any ordinary meaning of the term, and/or any evidence provided in the record. While the Examiner has suggested that the Examiner has reviewed the specification to determine that the meaning of the term "cost," the Examiner has not provided any specific passages supporting the Examiner's new definition for the term "cost." Accordingly, Applicant submits that the rejection under 35 U.S.C. § 112 is improper, obviated, and/or rendered moot.

Claim Rejections Under 35 U.S.C. § 112

Claims 1-36 have been rejected under 35 U.S.C. § 112, second paragraph as allegedly containing phrases rendering claims 1 and 24 indefinite.

With respect to the Examiner's concerns with a load balancer *not associated* with the virtual server, Applicant respectfully traverses the Examiner's rejection of this term. Applicant submits that the description of a load balancer associated (or not associated) with a virtual server, e.g., on the server side of a plurality of web servers is if associated with the virtual server, are described throughout the specification. For example, pages 1 (lines 25-33) describes a load balancer (GSLB) associated with a plurality of Web servers. Page 2, lines 13-27, describe numerous examples of a load balancer not associated with the virtual server. Accordingly, Applicant submits that

Applicant's use of the term is both supported by the specification and would be fully appreciated by one or ordinary skill in the art. Accordingly, this rejection should be withdrawn.

With respect to the Examiner's seemingly philosophical question of "how close is "closer,"" Applicant respectfully submits that the Examiner's question is irrelevant to any consideration of this claim. As specifically described at page 8, lines 25-28 of the specification, "[t]he term closer is used herein in accordance with any distance measure used in the communications field, such as geographical distance, number of router hops or wire link length. As used in the context of the claims, the load balancer is stated as being closer to the client than to the selected server, e.g., the difference between the various elements may be a mere microns, millions of meters, a few or many router hops, and/or numerous wire link lengths.

Claim Rejections under 35 U.S.C. §103

Claims 1-7, 13-17, 24-33, 35-37, 41, 42, and 44 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Skene et al. (U.S. Patent No. 7,047,301) in view of Brendel (U.S. Patent No. 6,182,139). Claims 8-10, 18-23, 34, 38-40, 43, and 47-51 have been rejected as being unpatentable over Skene et al. (U.S. Patent Publication No. 2001/0047415) in view of Brendel, and further in view of Zisapel (U.S. Patent No. 6,249,801). Claims 11, 12, 45 and 46 have been rejected under 35 U.S.C> § 103(a) as being unpatentable over Skene et al. ('301) in view of Brendel, and further in view of Cohen et al. (U.S. Patent No. 6,389,462). These rejections are respectfully traversed.

Claims 1, 24, 37, 41 and 47 are independent. Independent claims 1, 24, 37 and 47 are directed to methods for selecting a server, and independent claim 41 is directed to a load balancer. Independent claim 1 recites that "the load balancer comprises a client-controlled load balancer that directly selects said one of the plurality of servers representing the virtual server based on said one or more parameters". Independent claims 24, 37, 41 and 47 all include similar limitations.

For example, claim 1, recites, in part, a method of selecting a server (108) to represent a virtual server hosted by a plurality of servers. The method includes providing a client-controlled load balancer (102) that is not associated with the virtual server and that directly selects one of the plurality of servers (108) representing the virtual server based on one or more parameters provided by the load balancer (102). (See page 10, lines 1-12). Thus, according to the present invention, the client-controlled load balancer (102) is able to make an intelligent decision as to which virtual server would best serve the client (106).

In rejecting the independent claims as being unpatenable, the Office Action relies on the primary reference by Skene as teaching the claimed load balancer and in particular cites the EDNS server 160 in Figure 1 as corresponding to the claimed load balancer of the present invention. For the convenience of the reader, Fig. 1 of Skene is reproduced below:

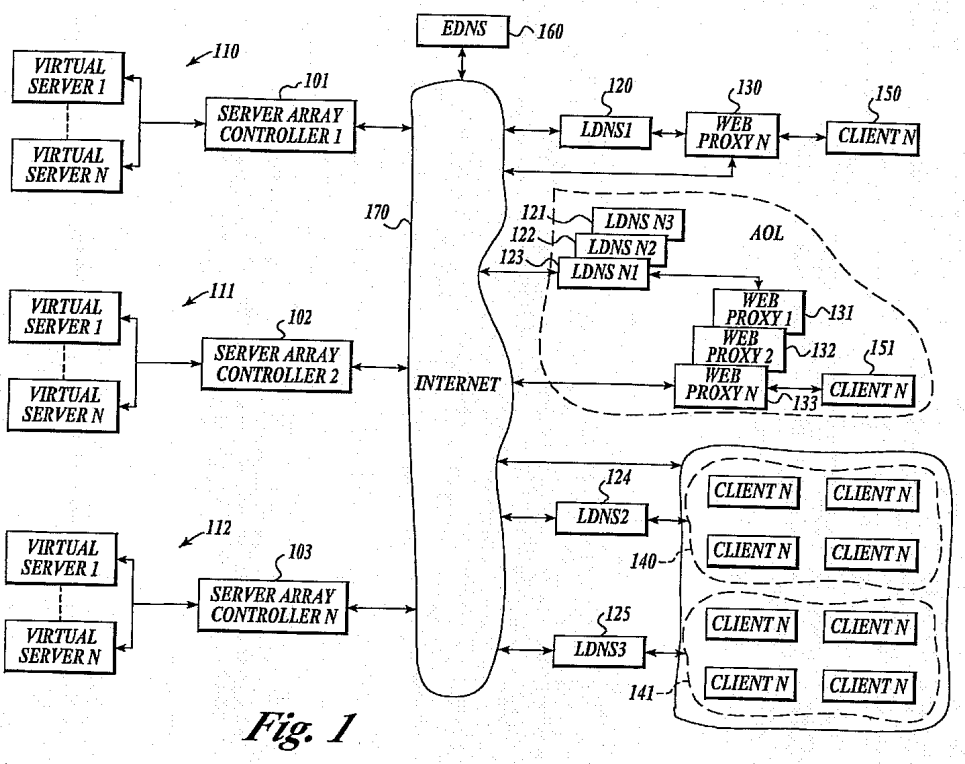

Fig. 1

The Office Action further relies on the secondary reference by Brendel as teaching a client-controlled load balancer that directly selects a server based on one or more parameters. The Office Action also indicates that it would have been obvious to one of ordinary skill in the art ... to combine Brendel ... and Skene et al. ... to improve the overall performance of the Internet and/or WAN links. However, combining Brendel with Skene would only cause the client 150 of Skene to select a Server Array Controller (SAC) 101, 102, 103, which then selects a particular virtual server 110, 111, 112.

It is respectfully submitted the EDNS server 160 of Skene, which allegedly corresponds to the claimed load balancer, only determines which server array controller SAC 101, 102 and 103 to select. Then, the SAC 101, 102 or 103 decides which virtual server 1 ... N is selected (see also paragraph [0028] – [0035], for example). Skene, therefore, is similar to the background art discussed in the present application in which a server array controller (SAC) which is not controlled by the client ultimately

determines which server to select. That is, the server array controller 101, 102, 103 in Skene determines which server to use. There is no teaching that the load balancer or EDNS 160 of Skene performs this function. This differs from the present application in which a client-controlled load balancer allows the client to determine how a server is to be selected, rather than having this determination performed by the manager of a particular website (see page 2, lines 25-27 of the present application, for example). The additional secondary references by Bertin et al., Friedman et al., Zisapel et al. and Brendel et al. also do not teach or suggest a client-controlled load balancer which is able to make an intelligent decision as to which virtual server would best serve the client.

In other words, the EDNS server 160 of Skene only determines which server array controller SAC 101, 102 and 103 to select. The EDNS server 160 does not select a virtual server. Then, the SAC 101, 102 or 103 decides which virtual server 1 ... N is selected (see also paragraph [0028] – [0035], for example). Accordingly, moving the operations of the EDNS server 160 of Skene to the client 150 of Skene based on the teachings of Brendel would result in a hypothetically modified system which is not the claimed invention. In the Examiner's hypothetically modified system, the client 150 still selects a particular SAC 101, 102, 103, instead of the EDNS server 160 selecting a virtual server. This is because Brendel teaches that multiple connection packets should be sent to different servers, and then the client is connected to the first server that responds. This is often referred to in the art as "Spray and Pray." Thus, the hypothetical combination of Brendel with Skene would result in the client 150 sending out packets to each SAC 101, 102, 103, and then selecting the SAC 101, 102, 103 that

first responds. The selected SAC would then determine what virtual server 110 to select. Accordingly, the hypothetical combination including Skene and Brendel is not the Applicant's claimed invention.

It is respectfully submitted that the additional secondary references alone or in combination also do not teach or suggest the claimed client-controlled load balancer of independent claims 1, 24, 37, 41 and 47 that directly selects one of the plurality of servers representing the virtual server.

Accordingly, with respect to claim 1, Skene and/or Brendel fail to describe or suggest a client-controlled load balancer that directly selects the one of the plurality of servers representing the virtual server based on the one or more parameters. Therefore, claim 1 and each of its dependent claims are patentable for at least this reason.

With respect to claim 24, Skene and/or Brendel fail to describe or suggest wherein the load balancer comprises a client-controlled load balancer that directly selects said one of the plurality of servers representing the virtual server based on said one or more parameters. Therefore, claim 24 and each of its dependent claims are patentable for at least this reason.

With respect to claim 37, Skene and/or Brendel fail to describe or suggest wherein the load balancer comprises a client-controlled load balancer that directly selects said one of the plurality of servers representing the virtual server based on said one or more parameters. In addition, the server in Skene and/or Brendel is not described or suggested as being selected partially upon the cost of communications between the client and one of the servers. In fact, Applicant submits that the Skene

reference does not describe or suggest any costs of communication, e.g., the loading balancing metrics do not describe "cost" anywhere in Skene, including the relied upon Col. 5, lines 18-43 of Skene. Therefore, claim 37 and each of its dependent claims are patentable for at least these reasons.

With respect to claim 41, Skene and/or Brendel fail to describe or suggest the processor comprises a client-controlled processor that directly selects the server to service the client based on the at least one attribute. Therefore, claim 41 and each of its dependent claims are patentable for at least this reason.

With respect to claim 47, Skene and/or Brendel fail to describe or suggest the load balancer comprises a client-controlled load balancer that directly selects said one of the plurality of servers representing the virtual server that minimizes or maximizes the chosen function. Therefore, claim 47 and each of its dependent claims are patentable for at least these reasons.

It is respectfully submitted that one skilled in the art would not be motivated to combine the teachings of the Skene and Brendel, and that there is insufficient motivation to combine the references as suggested in the Office Action. See, *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143 (Fed. Cir. 1985) ("When prior art references require selective combination by the court to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gleaned from the invention itself."). Applicant respectfully submits that the Examiner has impermissibly used hindsight gleaned from the Applicant's application to

combine the references, and that the alleged motivation identified in the Office Action is legally insufficient

For example, Skene's teachings described above regarding the selection of SACs 101, 102, 103 cannot be ignored because they are one of the main points of the Skene reference. If the proposed modification was made, it would render Skene's SAC's unsatisfactory for their intended purpose. There is no suggestion or motivation to make a proposed modification to a prior art reference, when the proposed modification renders the reference unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

It is clear that Skene and Brendel, either alone or in combination with the other cited prior art, do not disclose the recited features nor provide the necessary motivation to combine references. Accordingly, Applicant respectfully submits that the independent claims 1, 24, 37, 41 and 47 are patentable over the cited prior art, and the Examiner's rejection should be withdrawn.

Dependent claims 5, 34, and 38-40

With respect to claims 5, 34, and 38-40, the "load balancing metrics" described by Skene at col. 5, lines 18-43, do not suggest or describe any cost(s) associated with communication. Applicant respectfully submits that the Examiner has not cited any evidence of the term "cost," or terms synonymous with cost, anywhere in the prior art of record. Accordingly, claims 5, 34, and 38-40 are patentable for these additional reasons and/or for their dependency upon the allowable independent claims. Applicant requests clarification from the Examiner as to any evidence of any costs of

communication being considered by or described in any of the references relied upon by the Examiner.

Applicant does not acquiesce in the Examiner's characterizations of the art. For brevity and to advance prosecution, however, Applicant may have not addressed all characterizations of the art and reserves the right to do so in further prosecution of this or a subsequent application. The absence of an explicit response by Applicant to any of the Examiner's positions does not constitute a concession of the Examiner's positions. The fact that Applicant's comments have focused on particular arguments does not constitute a concession that there are not other arguments for patentability of the claims. All of the dependent claims are patentable for at least the reasons given with respect to the claims on which they depend.

CONCLUSION

Applicant has made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Martin R. Geissler, Applicant's Attorney at 1.703.621.7140 so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 50-1602 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully Submitted,

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